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Application No.: 10/713,406

Docket No.: 03226/337001; SUN040164

**AMENDMENTS TO THE CLAIMS**

Please amend the claims as follows.

1. (Currently Amended) A method ~~[[of a]]~~ for speculative tracing of a program, comprising:  
    ~~defining the speculative tracing using a plurality of probes to trace the program;~~  
    ~~firing at least one of the plurality of probes defined by the speculative tracing;~~  
    ~~allocating at least one instance of a first speculative buffer arranged to transfer data to a first~~  
    ~~principal buffer using one of the plurality of probes, if one of the plurality of probes~~  
    ~~comprises a first speculation function, wherein the first speculative buffer is~~  
    ~~associated with a first processor;~~  
    encountering one of the plurality of probes during tracing of the program;  
    executing an action in the encountered probe to obtain data associated with the program;  
    storing the data in the first speculative buffer;  
    ~~determining a first state value associated with the first speculative buffer;~~  
    committing the data to a first principal buffer from the first speculative buffer based on a  
    state value associated with the tracing of the program, if one of the plurality of  
    probes comprising a commit function is encountered;  
    discarding the data in the first speculative buffer based on the state value, if one of the  
    plurality of probes comprising a discard function is encountered; and  
    evaluating the data transferred to the first principal buffer.
2. (Currently Amended) The method according to claim 1, wherein the ~~first~~ state value comprises at least one of a group consisting of a speculate-one state, a speculate-many state, a commit-one state, a commit-many state, and a discard state.
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)

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6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
9. (Original) The method according to claim 1, further comprising:  
modifying a size of the first speculative buffer.
10. (Original) The method according to claim 1, further comprising:  
incrementing a drop counter for a speculative drop of data in the first speculative buffer.
11. (Original) The method according to claim 10, wherein the speculative drop corresponds to  
failing to transfer the data from the first speculative buffer.
12. (Original) The method according to claim 10, wherein the speculative drop corresponds to  
failing to store the data in the first speculative buffer.
13. (Currently Amended) The method according to claim 1, further comprising:  
executing a cleaning operation for the first speculative buffer associated with the first  
processor if one of the plurality of probes comprising the discard function is  
encountered.
14. (Original) The method according to claim 13, wherein the cleaning operation occurs at a  
specified cleaning rate.
15. (Original) The method according to claim 13, wherein the cleaning operation comprises  
resetting the first speculative buffer.
16. (Cancelled)
17. (Currently Amended) A system for ~~a speculative~~ tracing using a tracing framework, comprising:  
a plurality of probes executing on the tracing framework, wherein each of the plurality of  
probes is associated with a speculation;

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a first principal buffer configured to store data from the tracing framework and associated with a first processor, wherein data is traced from the first processor using one of the plurality of probes; and

~~a first instance of a~~ first speculative buffer associated with the first principal buffer and configured to transfer data to the first principal buffer, wherein the first speculative buffer has a first state value associated therewith, wherein the first speculative buffer is allocated using one of the plurality of probes, and wherein the data traced from the first processor is stored in the first speculative buffer; and

~~a plurality of probes defining the speculative tracing executing on the tracing framework;~~  
wherein the data from the first speculative buffer is committed to the first principal buffer if one of the plurality of probes comprising a commit function is encountered,  
wherein the data from the first speculative buffer is discarded if one of the plurality of probes comprising a discard function is encountered, and  
wherein the first state value associated with the speculation is updated upon firing at least one of the plurality of probes.

18. (Currently Amended) The system according to claim 17, wherein the first state value comprises at least one of a group consisting of an active state, a speculate-one state, a speculate-many state, a commit-one state, a commit-many state and a discard state.

19. (Currently Amended) The system according to claim 18, wherein, when the state value is in the active state, the data may be stored in the first speculative buffer ~~wherein the active state corresponds to firing one of the plurality of probes comprising a first speculation function.~~

20. (Cancelled)

21. (Cancelled)

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22. (Currently Amended) The system according to claim [[21]] 17, further comprising:

a second principal buffer configured to store data from the tracing framework and associated with ~~[[the]]~~ a second processor, wherein a second ~~instance of the first~~ speculative buffer is associated with the second ~~principal buffer processor~~ and configured to transfer data to the second principal buffer.

23. (Currently Amended) The system according to claim 18, wherein, when the state value is ~~wherein the commit-one state, data in the first speculative buffer are transferred to the first principal buffer corresponds to firing one of the plurality of probes comprising a commit function.~~

24. (Currently Amended) The system according to claim 18, wherein, when the state value is the commit-many state, data in the first speculative buffer and data in a second speculative buffer are transferred to the first principal buffer ~~corresponds to firing one of the plurality of probes comprising a commit function.~~

25. (Currently Amended) The system according to claim 18, wherein, when the state value is the discard state, data in the first speculative buffer is discarded ~~corresponds to firing one of the plurality of probes comprising a discard function.~~

26. (Original) The system according to claim 17, wherein a size of the first speculative buffer is configurable.

27. (Original) The system according to claim 17, further comprising:

a drop counter for incrementing a speculative drop of data in the first speculative buffer.

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28. (Currently Amended) The system according to claim 17, further comprising:

a second speculative buffer associated with the first principal buffer and configured to store data and transfer data to the first principal buffer, wherein the second speculative buffer is associated with the state value ~~has a second state value associated therewith, wherein the second speculative buffer is allocated using one of the plurality of probes, and wherein data traced from the first processor is stored in the second speculative buffer~~

~~wherein the second state value is updated upon firing at least one of the plurality of probes.~~

29. (Currently Amended) The system according to claim 28, wherein the ~~first instance of the first speculative buffer and the second speculative buffer~~ are located in respective cells of an array.

30. (Cancelled)

31. (Cancelled)

32. (Currently Amended) A computer system for ~~a speculative tracing~~ a program comprising:

a first processor;

a memory;

a storage device; and

software instructions stored in the memory for enabling the computer system to:

~~define the speculative tracing using a plurality of probes;~~

~~fire at least one of the plurality of probes defined by the speculative tracing;~~

~~allocate at least one instance of a first speculative buffer arranged to transfer data to a~~

~~first principal buffer using one of the plurality of probes, if one of the plurality of probes comprises a first speculation function;~~

~~determine a first state value associated with the first speculative buffer;~~

define a plurality of probes to trace the program;

allocate a first speculative buffer using one of the plurality of probes, wherein the

first speculative buffer is associated with a first processor;

encounter one of the plurality of probes during tracing of the program;

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execute an action in the encountered probe to obtain data associated with the program;

store the data in the first speculative buffer;

commit the data to a first principal buffer from the first speculative buffer based on a state value associated with the tracing of the program, if one of the plurality of probes comprising a commit function is encountered;

discard the data in the first speculative buffer based on the state value, if one of the plurality of probes comprising a discard function is encountered; and

evaluate the data transferred to the first principal buffer.

33. (Cancelled)